

108TH CONGRESS
1ST SESSION

H. R. 3598

To establish an interagency committee to coordinate Federal manufacturing research and development efforts in manufacturing, strengthen existing programs to assist manufacturing innovation and education, and expand outreach programs for small and medium-sized manufacturers, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

NOVEMBER 21, 2003

Mr. EHLERS (for himself and Mr. UDALL of Colorado) introduced the following bill; which was referred to the Committee on Science

A BILL

To establish an interagency committee to coordinate Federal manufacturing research and development efforts in manufacturing, strengthen existing programs to assist manufacturing innovation and education, and expand outreach programs for small and medium-sized manufacturers, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Manufacturing Tech-
5 nology Competitiveness Act of 2003”.

1 **SEC. 2. INTERAGENCY COMMITTEE AND ADVISORY COM-**
2 **MITTEE.**

3 (a) INTERAGENCY COMMITTEE.—

4 (1) ESTABLISHMENT.—The President shall es-
5 tablish an interagency committee on manufacturing
6 research and development, which shall include rep-
7 resentatives from the Office of Science and Tech-
8 nology Policy, the National Institute of Standards
9 and Technology, the Small Business Administration,
10 the Science and Technology Directorate of the De-
11 partment of Homeland Security, the National
12 Science Foundation, the Department of Energy's
13 Office of Industrial Technology, a representative of
14 the Department of Energy National Laboratories
15 with expertise in manufacturing research, and any
16 other agency that the President may designate. The
17 Interagency Committee shall be chaired by the
18 Under Secretary of Commerce for Manufacturing
19 and Technology.

20 (2) FUNCTIONS.—The Interagency Committee
21 shall be responsible for the planning and coordina-
22 tion of Federal efforts in manufacturing research
23 and development through—

24 (A) establishing goals and priorities for co-
25 ordinated manufacturing research and develop-
26 ment, including the strengthening of United

1 States manufacturing through the support and
2 coordination of Federal manufacturing re-
3 search, development, technology transfer, stand-
4 ards, and technical training;

5 (B) propose a coordinated interagency
6 budget for manufacturing research and develop-
7 ment to the Office of Management and Budget
8 that will ensure the maintenance of a balanced
9 research portfolio and ensure that each agency
10 is allocated the level of funding required to
11 meet the goals and priorities established for
12 manufacturing research and development; and

13 (C) developing, within 6 months after the
14 date of enactment of this Act, and updating
15 every 3 years, a strategic plan, to be trans-
16 mitted to the Committee on Science of the
17 House of Representatives and the Committee
18 on Commerce, Science, and Transportation of
19 the Senate, and to the President, for manufac-
20 turing research and development that in-
21 cludes—

22 (i) an analysis of the research, devel-
23 opment, technology transfer, standards,
24 technical training, and integration needs of
25 the manufacturing sector important to en-

1 suring and maintaining United States com-
2 petitiveness;

3 (ii) a report on the various Federal
4 programs involved in manufacturing re-
5 search, development, technical training,
6 standards, and integration, their funding
7 levels, and the degree to which they meet
8 the needs identified under clause (i);

9 (iii) an analysis of the gaps that exist
10 in those Federal programs and rec-
11 ommendations of changes that should be
12 made to fill those gaps; and

13 (iv) a plan on how to better coordi-
14 nate and strengthen federally supported
15 manufacturing research, development,
16 technical training, and integration activi-
17 ties.

18 (3) RECOMMENDATIONS AND VIEWS.—In car-
19 rying out its functions under paragraph (2), the
20 Interagency Committee shall consider the input and
21 recommendations of the Advisory Committee and the
22 views of academic, State, industry, and other entities
23 in the manufacturing research and development
24 community.

1 (4) COORDINATION OF GRANT PROGRAMS.—To
2 ensure the effective implementation of the collabo-
3 rative grant program under section 33 of the Na-
4 tional Institute of Standards and Technology Act,
5 the member agencies of the Interagency Committee
6 shall, where practicable, coordinate their manufac-
7 turing grant activities with that program.

8 (b) ADVISORY COMMITTEE.—

9 (1) ESTABLISHMENT.—Not later than 6
10 months after the date of enactment of this Act, the
11 President shall establish an advisory committee to
12 provide advice and information to the Interagency
13 Committee from the non-Federal manufacturing re-
14 search and development community. The Advisory
15 Committee shall be composed of no more than 25
16 members appointed by the President, including the
17 following:

18 (A) 4 members from outside the Federal
19 Government who are eminent in the manufac-
20 turing industry, at least 2 of whom are rep-
21 resentatives of small and medium-sized compa-
22 nies in such industry.

23 (B) 4 members from the academic research
24 community who are eminent in their field and
25 have expertise in the manufacturing sciences.

1 (C) 3 members from labor unions, a major-
2 ity of whose membership have manufacturing
3 jobs.

4 (2) INPUT AND RECOMMENDATIONS.—The Ad-
5 visory Committee shall assist the Interagency Com-
6 mittee by providing it with input and recommenda-
7 tions on—

8 (A) the goals and priorities for manufac-
9 turing research and development; and

10 (B) the strategic plan, including proposals
11 for focus areas for research, development, tech-
12 nology transfer, standards, technical training,
13 supply chain integration, and the identification
14 and proposal of technological or organizational
15 solutions to challenges such as outsourcing.

16 (3) REPORT.—The Advisory Committee shall
17 also assist the Interagency Committee in the update
18 of its strategic plan by providing a report every 3
19 years, which shall also be transmitted to the Com-
20 mittee on Science of the House of Representatives
21 and the Committee on Commerce, Science, and
22 Transportation of the Senate, and to the President,
23 that shall assess—

24 (A) the progress made in implementing the
25 strategic plan and challenges to this progress;

1 (B) the management, coordination, imple-
2 mentation of activities under the strategic plan;

3 (C) the effectiveness of these activities in
4 improving United States manufacturing com-
5 petitiveness;

6 (D) the need to revise the goals and prior-
7 ities established by the Interagency Committee;
8 and

9 (E) new and emerging problems and op-
10 portunities affecting the manufacturing re-
11 search community, including workforce issues,
12 education, research infrastructure, and the
13 measurement and statistical analysis of manu-
14 facturing that may need to be considered by the
15 Interagency Committee.

16 (4) FEDERAL ADVISORY COMMITTEE ACT AP-
17 PPLICATION.—Section 14 of the Federal Advisory
18 Committee Act shall not apply to the Advisory Com-
19 mittee.

20 **SEC. 3. MANUFACTURING AND TECHNOLOGY.**

21 (a) AMENDMENT.—Section 5 of the Stevenson-
22 Wydler Technology Innovation Act of 1980 (15 U.S.C.
23 3704) is amended to read as follows:

1 **“SEC. 5. MANUFACTURING AND TECHNOLOGY.**

2 “(a) ESTABLISHMENT.—There is established in the
3 Department of Commerce a Manufacturing and Tech-
4 nology Administration, which shall operate in accordance
5 with the provisions, findings, and purposes of this Act.
6 The Manufacturing and Technology Administration shall
7 include—

8 “(1) the National Institute of Standards and
9 Technology;

10 “(2) the National Technical Information Serv-
11 ice; and

12 “(3) a policy analysis office, which shall be
13 known as the Office of Manufacturing and Tech-
14 nology Policy.

15 “(b) UNDERSECRETARY AND ASSISTANT SECRE-
16 TARIES.—The President shall appoint, by and with the ad-
17 vice and consent of the Senate, to the extent provided for
18 in appropriations Acts—

19 “(1) an Under Secretary of Commerce for Man-
20 ufacturing and Technology, who shall be an indi-
21 vidual with engineering or management experience
22 in manufacturing, including experience with small
23 and medium-sized manufacturing firms, and experi-
24 ence in dealing with public policy matters related to
25 manufacturing, and who shall be compensated at the

1 rate provided for level III of the Executive Schedule
2 in section 5314 of title 5, United States Code;

3 “(2) an Assistant Secretary of Manufacturing
4 who shall serve as a policy analyst for the Under
5 Secretary; and

6 “(3) an Assistant Secretary of Technology who
7 shall serve as a policy analyst for the Under Sec-
8 retary.

9 “(c) UNDER SECRETARY’S DUTIES.—The Secretary,
10 through the Under Secretary, as appropriate, shall—

11 “(1) manage the Manufacturing and Tech-
12 nology Administration and supervise its agencies,
13 programs, and activities;

14 “(2) serve as a point of contact on Federal
15 manufacturing research and development, as well as
16 broader policy issues related to manufacturing, for
17 discussions among industry, academic, labor, and
18 other groups;

19 “(3) provide that cooperative efforts to stimu-
20 late industrial competitiveness and innovation be un-
21 dertaken between the Under Secretary and other of-
22 ficials in the Department of Commerce responsible
23 for such areas as trade and economic assistance;

24 “(4) encourage and assist the creation of cen-
25 ters and other joint initiatives by State or local gov-

1 ernments, regional organizations, private businesses,
2 institutions of higher education, nonprofit organiza-
3 tions, or Federal laboratories to encourage tech-
4 nology transfer, to encourage innovation, and to pro-
5 mote an appropriate climate for investment in tech-
6 nology-related industries;

7 “(5) propose and encourage cooperative re-
8 search involving appropriate Federal entities, State
9 or local governments, regional organizations, colleges
10 or universities, nonprofit organizations, or private
11 industry to promote the common use of resources, to
12 improve training programs and curricula, to stimu-
13 late interest in manufacturing and technology ca-
14 reers, and to encourage the effective dissemination
15 of manufacturing and technology skills within the
16 wider community;

17 “(6) propose and support studies and policy ex-
18 periments, in cooperation with other Federal agen-
19 cies, to determine the effectiveness of measures for
20 improving United States manufacturing capabilities
21 and productivity; and

22 “(7) ensure that activities undertaken by the
23 Manufacturing and Technology Administration,
24 where appropriate, take into account the needs of
25 small and medium-sized manufacturers.

1 “(d) ASSISTANT SECRETARIES’ DUTIES.—The As-
2 sistant Secretaries described in subsection (b)(2) and (3)
3 shall—

4 “(1) produce periodic manufacturing reports
5 and policy analyses for use by the Advisory Com-
6 mittee described in paragraph (3), Federal agencies,
7 policymakers, and manufacturers, which may include
8 such subjects as technology trends, workforce, edu-
9 cation, and the manufacturing economy, to guide im-
10 provements in United States industrial productivity;

11 “(2) identify manufacturing and technological
12 needs, problems, and opportunities within and across
13 industrial sectors that, if addressed, could make sig-
14 nificant contributions to the economy of the United
15 States;

16 “(3) provide technical and administrative sup-
17 port to the Interagency Committee established or
18 designated under section 2(a) of the Manufacturing
19 Technology Competitiveness Act of 2003 and the
20 Advisory Committee established or designated under
21 section 2(b) of the Manufacturing Technology Com-
22 petitiveness Act of 2003; and

23 “(4) conduct public outreach, including the dis-
24 semination of findings and recommendations of the
25 Interagency Committee and the Advisory Committee

1 described in paragraph (3), and of the activities of
2 the Manufacturing and Technology Administration.

3 “(e) REPORT ON FOREIGN EFFORTS.—Not later
4 than one year after the date of enactment of this Act, the
5 Under Secretary of Commerce for Manufacturing and
6 Technology shall submit a report to Congress describing
7 the efforts of foreign governments to attract and develop
8 technology-based manufacturing, including supporting
9 technical and scientific education, research and develop-
10 ment, development of standards, and encouraging techno-
11 logical investment from overseas.”

12 (b) CONFORMING AMENDMENTS.—Section 4 of the
13 Stevenson-Wydler Technology Innovation Act of 1980 (15
14 U.S.C. 3703) is amended—

15 (1) in paragraph (1), by inserting “Manufac-
16 turing and” after “Office of”; and

17 (2) in paragraph (3), by inserting “Manufac-
18 turing and” after “Under Secretary of Commerce
19 for”.

20 **SEC. 4. COLLABORATIVE MANUFACTURING RESEARCH**
21 **GRANTS.**

22 The National Institute of Standards and Technology
23 Act is amended—

24 (1) by redesignating the first section 32 as sec-
25 tion 34 and moving it to the end of the Act; and

1 tiveness of United States manufacturing, and build
2 lasting alliances among collaborators.

3 “(b) PROGRAM CONTRIBUTION.—Awards under this
4 section shall provide for not more than one-third of the
5 costs of a partnership. Not more than an additional one-
6 third of such costs may be obtained directly or indirectly
7 from other Federal sources.

8 “(c) APPLICATIONS.—Applications for awards under
9 this section shall be submitted in such manner, at such
10 time, and containing such information as the Director
11 shall require. Such applications shall describe at a min-
12 imum—

13 “(1) how each partner will participate in devel-
14 oping and carrying out the research agenda of the
15 partnership;

16 “(2) the work that the grant would fund; and

17 “(3) how the work to be funded with the award
18 would contribute to improved performance, produc-
19 tivity, and competitiveness of the United States
20 manufacturing industry.

21 “(d) SELECTION CRITERIA.—In selecting applica-
22 tions for awards under this section, the Director shall con-
23 sider at a minimum—

24 “(1) the degree to which projects will have a
25 broad impact on manufacturing;

1 “(2) the novelty and scientific and technical
2 merit of the proposed projects;

3 “(3) the demonstrated capabilities of the appli-
4 cants to successfully carry out the proposed re-
5 search; and

6 “(4) any other criteria the Director may re-
7 quire.

8 “(e) DISTRIBUTION.—In selecting applications under
9 this section the Director shall ensure, to the extent prac-
10 ticable a distribution of overall awards among a variety
11 of manufacturing industry sectors and a range of firm
12 sizes.

13 “(f) PREFERENCE.—The Director shall give pref-
14 erence to the selection of applicants whose proposals in-
15 clude training of qualified candidates at educational insti-
16 tutions or industrial facilities.

17 “(g) REPORT.—Not later than 2 years after the date
18 of enactment of this Act, the Director shall transmit to
19 Congress a report on the performance of the program
20 under this section.”.

21 **SEC. 5. MANUFACTURING FELLOWSHIP PROGRAM.**

22 (a) ESTABLISHMENT.—In order to promote the de-
23 velopment of a robust research community working at the
24 leading edge of manufacturing sciences, the Director of

1 the National Institute of Standards and Technology shall
2 establish a program to award—

3 (1) postdoctoral research fellowships to individ-
4 uals who are seeking research positions at institu-
5 tions, including the National Institute of Standards
6 and Technology, engaged in research activities re-
7 lated to manufacturing sciences; and

8 (2) senior research fellowships to individuals
9 seeking research positions at institutions, including
10 the National Institute of Standards and Technology,
11 engaged in research activities related to manufac-
12 turing sciences.

13 (b) APPLICATIONS.—To be eligible for an award
14 under this section, an individual shall submit an applica-
15 tion to the Director of the National Institute of Standards
16 and Technology at such time, in such manner, and con-
17 taining such information as the Director may require.

18 (c) STIPEND LEVELS.—Under this section, the Di-
19 rector shall provide stipends for postdoctoral research fel-
20 lowships at a level consistent with the National Institute
21 of Standards and Technology Postdoctoral Research Fel-
22 lowship Program, and senior research fellowships at levels
23 consistent with support for a faculty member in a sab-
24 batical position.

1 **SEC. 6. AUTHORIZATION OF APPROPRIATIONS.**

2 There are authorized to be appropriated to the Sec-
3 retary of Commerce for the Collaborative Manufacturing
4 Research Grants program under section 33 of the Na-
5 tional Institute of Standards and Technology Act and for
6 Manufacturing Fellowships at the National Institute of
7 Standards and Technology under section 5 of this Act—

8 (1) \$41,500,000 for fiscal year 2005, of which
9 \$40,000,000 shall be for the program under section
10 33 of the National Institute of Standards and Tech-
11 nology Act and \$1,500,000 shall be for the program
12 under section 5 of this Act;

13 (2) \$45,750,000 for fiscal year 2006, of which
14 \$44,000,000 shall be for the program under section
15 33 of the National Institute of Standards and Tech-
16 nology Act and \$1,750,000 shall be for the program
17 under section 5 of this Act;

18 (3) \$50,000,000 for fiscal year 2007, of which
19 \$48,000,000 shall be for the program under section
20 33 of the National Institute of Standards and Tech-
21 nology Act and \$2,000,000 shall be for the program
22 under section 5 of this Act; and

23 (4) \$54,250,000 for fiscal year 2008, of which
24 \$52,000,000 shall be for the program under section
25 33 of the National Institute of Standards and Tech-

1 nology Act and \$2,250,000 shall be for the program
2 under section 5 of this Act.

3 **SEC. 7. MANUFACTURING EXTENSION.**

4 (a) **MANUFACTURING CENTER EVALUATION.**—Sec-
5 tion 25(c)(5) of the National Institute of Standards and
6 Technology Act (15 U.S.C. 278k(c)(5)) is amended by in-
7 serting “A Center that has not received a positive evalua-
8 tion by the evaluation panel shall be notified by the panel
9 of the deficiencies in its performance and placed on proba-
10 tion for one year, after which time the panel shall reevalu-
11 ate the Center. If the Center has not addressed the defi-
12 ciencies identified by the panel, or shown a significant im-
13 provement in its performance, the Director shall conduct
14 a new competition to select an operator for the Center.”
15 after “sixth year at declining levels.”.

16 (b) **MANUFACTURING EXTENSION CENTER COMPETI-**
17 **TIVE GRANT PROGRAM.**—Section 25 of the National Insti-
18 tute of Standards and Technology Act (15 U.S.C. 278k)
19 is amended by adding at the end the following new sub-
20 section:

21 “(e) **COMPETITIVE GRANT PROGRAM.**—

22 “(1) **ESTABLISHMENT.**—The Director shall es-
23 tablish, within the Manufacturing Extension Part-
24 nership program under this section and section 26
25 of this Act, a program of competitive awards among

1 participants described in paragraph (2) for the pur-
2 poses described in paragraph (3).

3 “(2) PARTICIPANTS.—Participants receiving
4 awards under this subsection shall be the Centers, or
5 a consortium of such Centers.

6 “(3) PURPOSE.—The purpose of the program
7 under this subsection is to develop projects to solve
8 new or emerging manufacturing problems as deter-
9 mined by the Director, in consultation with the Di-
10 rector of the Manufacturing Extension Partnership
11 program, the Manufacturing Extension Partnership
12 National Advisory Board, and small and medium-
13 sized manufacturers. One or more themes for the
14 competition may be identified, which may vary from
15 year to year, depending on the needs of manufactur-
16 ers and the success of previous competitions. These
17 themes may be related to projects associated with
18 manufacturing extension activities, including work-
19 force training, supply chain integration, and quality
20 management, or extend beyond these traditional
21 areas.

22 “(4) APPLICATIONS.—Applications for awards
23 under this subsection shall be submitted in such
24 manner, at such time, and containing such informa-
25 tion as the Director shall require, in consultation

1 with the Manufacturing Extension Partnership Na-
2 tional Advisory Board.

3 “(5) SELECTION.—Awards under this sub-
4 section shall be peer reviewed and competitively
5 awarded. The Director shall select proposals to re-
6 ceive awards—

7 “(A) that utilize innovative or collaborative
8 approaches to solving the problem described in
9 the competition;

10 “(B) that will improve the competitiveness
11 of industries in the region in which the Center
12 or Centers are located; and

13 “(C) that will contribute to the long-term
14 economic stability of that region.

15 “(6) PROGRAM CONTRIBUTION.—Recipients of
16 awards under this subsection shall not be required
17 to provide a matching contribution.

18 “(7) REPORT.—Not later than two years after
19 the first awards under this subsection, the Director
20 shall transmit to Congress a report on the program
21 describing the grants that were awarded, their re-
22 cipients, the success to date of the program to meet
23 the purposes of this subsection, lessons learned, and
24 the challenges and opportunities facing the future
25 success of the program.

1 “(8) FUNDING.—Funding for the program
2 under this subsection shall not be available unless
3 amounts remain available after financial assistance
4 is provided to Centers as specified under this sec-
5 tion.”.

6 (c) AUTHORIZATION OF APPROPRIATIONS.—There
7 are authorized to be appropriated to the Secretary of Com-
8 merce for the Manufacturing Extension Partnership pro-
9 gram under sections 25 and 26 of the National Institute
10 of Standards and Technology Act (15 U.S.C. 278k and
11 278l)—

- 12 (1) \$120,000,000 for fiscal year 2005;
13 (2) \$125,000,000 for fiscal year 2006;
14 (3) \$132,000,000 for fiscal year 2007; and
15 (4) \$137,000,000 for fiscal year 2008.

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